

## ABSTRACT

## ANTENNA DIVERSITY RECEIVER

5        An antenna diversity receiver comprises a zero-IF receiver connected to  
two antennas (102a, 102b) via switches (532,534). Simultaneous  
measurement of signal qualities from both antennas is possible by routing  
signals from the first antenna (102a) via a first mixer (106) and channel filter  
(116) and routing signals from the second antenna (102b) via a second mixer  
10 (108) and channel filter (118). A diversity controller (536) compares the signal  
qualities received from the antennas (102a,102b) during a data preamble to  
select a preferred antenna, then adjusts the switches (532,534) to route the  
signals from the preferred antenna to both input mixers (106,108). The  
amplifier (104a,104b) connected to the deselected antenna may be switched  
15 off during data reception, thereby minimising extra power consumption.

Such an antenna diversity receiver enables effective antenna selection  
to be performed, even in systems such as Bluetooth where only a very short  
preamble is provided for receiver configuration.

20 (Figure 5)